

These facts seem to me to make more than probable the supposition that at an earlier period the specimen had suffered evisceration without the visceral mass being completely detached. By the continuity of the ambulacral grooves of two of the arms of the normal disk with one of the grooves of the supernumerary disk a supply of food would be ensured to the latter without seriously curtailing that of the former during regeneration. In the paper just cited Mr. Dendy has shown in how short a time the visceral mass may be regenerated, twenty-one days being a sufficient length of time for regeneration to become so complete that "there is little to distinguish a regenerated specimen of this date from a normal *Antedon* except the small size of the visceral mass and the want of pigment upon it."

The abnormal character and displacement of the anus and the canal-like ambulacrum are not so easily accounted for; but they are minor points, and do not appear to me to impair the value of what has been advanced above.

EXPLANATION OF PLATE VIII.

List of reference letters.

<i>a.</i> Anus.	<i>g'</i> . Gut of supernumerary disk.
<i>a.g.</i> Ambulacral grooves.	<i>m.</i> Mouth.
<i>c.</i> Abnormal ambulacrum.	<i>r.w.v.</i> Radial water-vessel.
<i>c.w.v.</i> Circum-oral water-vessel.	<i>s.d.</i> Supernumerary disk.
<i>f.p.</i> Funnel-shaped projection of supernumerary disk.	<i>s.o.</i> Skeletal ossicles.
<i>g.</i> Gut.	<i>w.t.</i> Water-tubes.
	<i>x.</i> Ambulacral groove.

Fig. 1. Oral surface of abnormal specimen of *Antedon rosacea*, $\times 5$.

Fig. 2. Aboral surface of abnormal specimen of *Antedon rosacea*, $\times 5$.

Fig. 3. Sagittal section through the normal and supernumerary disks, showing the point of union of the two, $\times 16$.

Fig. 4. Sagittal section of the supernumerary disk, passing through the mouth and anus, $\times 16$.

Fig. 5. Sagittal section of the supernumerary disk, showing the funnel-shaped projection traversed by the abnormal ambulacrum, $\times 16$.

XXX.—*List of the Fishes collected by Mr. E. W. Oates in the Southern Shan States, and presented by him to the British Museum.* By G. A. BOULENGER.

THE collection made by Mr. Oates in a district previously unexplored, so far as Fishes are concerned, proves of great interest. It adds to our knowledge of the extension of species

both from the Burmese and Siamese sides, and reveals the existence of seven previously undescribed species, all of which are represented by excellently preserved specimens. I may here add that the collection of Reptiles formed by Mr. Oates in the same district, although poor in number of specimens, yielded the type of a new genus and species of Snakes, which has been lately described in the first volume of the new Catalogue of Snakes as *Trirhinopholis nuchalis*, and an example of a Lizard previously unrepresented in the Museum, *Acanthosaura kakhienensis*, Anderson.

Ophiocephalidæ.

1. *Ophiocephalus gachua*, Ham. Buch.

Nampandet, 2000 feet; Fort Stedman, 3000 feet.

2. *Ophiocephalus siamensis*, Gthr.

Fort Stedman.

Mastacembelidæ.

3. *Mastacembelus Oatesii*, sp. n.

Depth of body $9\frac{1}{2}$ to $10\frac{1}{2}$ times in total length, length of head $6\frac{1}{2}$ to 7 times. Snout thrice as long as diameter of eye, ending in a trifid appendage; cleft of mouth extending hardly to below nostril; four or five strong spines at angle of præoperculum, increasing in size from the lower to the upper. Vertical fins distinct, united only at the base with the caudal. Dorsal XXIX-XXXIII * 48-55; originating above middle of pectoral. Anal III 46-55. Pectoral about $\frac{1}{3}$ length of head. 18-20 scales between origin of soft dorsal and lateral line. Pale yellowish brown, uniform or marbled with brown or with irregular dark brown blotches; dorsal line and top of head dark brown; pectoral usually brown with broad yellowish border.

Total length 290 millim.

Fort Stedman, 3000 feet. Eight specimens.

4. *Mastacembelus caudiocellatus*, sp. n.

Depth of body $8\frac{2}{3}$ to 10 times in total length, length of head 5 to $5\frac{1}{3}$ times. Snout thrice as long as diameter of eye, ending in a trifid appendage; cleft of mouth extending hardly to below nostril; no spines on præoperculum. Vertical fins distinct, united only at the base with the caudal.

* 29 spines in one specimen, 33 in two, 32 in the five others.

Dorsal XXXI-XXXIII 62-66; originating above extremity of pectoral, or a little behind. Anal III 60-65. Pectoral $\frac{1}{5}$ to $\frac{2}{9}$ length of head. 25-30 scales between origin of soft dorsal and lateral line. Brown above, yellow beneath; two or three blackish streaks along the sides, the upper proceeding from the eye; blackish marblings below the lateral streaks; a series of blackish ocelli with yellowish centres along the side of the tail; vertical fins yellowish, reticulated with black.

Total length 235 millim.

Fort Stedman, 3000 feet. Five specimens*.

Siluridæ.

5. *Clarias magur*, Ham. Buch.

Fort Stedman, 3000 feet.

6. *Silurus afghana*, Gthr.

NampanDET, 2000 feet.

7. *Amblyceps mangois*, Ham. Buch.

NampanDET.

8. *Macrones Dayi*, Vincig.

NampanDET.

Cyprinidæ.

9. *Cyprinus carpio*, L.

Fort Stedman, 3000 feet.

26 to 30 scales in the lateral line.

10. *Labeo angra*, Ham. Buch.

NampanDET, 2000 feet.

* The fine collection of Fish made by Mr. Oates in the Sittang River and adjacent streams from Toungoo to about 150 miles south, and presented by him to the British Museum in 1891, contains examples of another new *Mastacembelus*, which I propose to name

Mastacembelus albo guttatus, sp. n.

Depth of body 10 times in total length, length of head 7 times. Snout 4 to $4\frac{1}{2}$ times as long as diameter of eye, ending in a trifold appendage; cleft of mouth not extending to below nostril; three strong spines at angle of præoperculum, increasing in size from the lower to the upper. Vertical fins united at the base with the caudal. Dorsal XXXV-XXXVI 75-85; originating above middle of pectoral. Anal III 70-80. Pectoral nearly half as long as head. 25-30 scales between origin of soft dorsal and lateral line. Body and fins (pectorals included) dark brown, all over with round white spots; large blackish spots may be present on the body.

Total length 490 millim.

11. *Cirrhinia latia*, Ham. Buch.

NampanDET.

12. *Barbus Oatesii*, sp. n.

Section *Barbodes*, Blkr. Depth of body $2\frac{3}{4}$ to 3 times in total length; length of head 4 to $4\frac{1}{3}$ times. Snout rounded, slightly prominent, as long as diameter of eye, which is $3\frac{1}{3}$ to $3\frac{1}{2}$ times in length of head; interorbital width 3 times in length of head; maxillary barbel as long as diameter of eye, rostral barbel a little shorter. Dorsal IV 8; spine strong, very strongly serrated, with 12 to 19 serræ, a little shorter than the head, opposite to first ventral ray, and equally distant from end of snout and caudal fin. Anal III 5, longest ray $\frac{3}{4}$ length of head. Scales 29-33 $\frac{5}{4\frac{1}{2}}$; 3 scales between lateral line and base of ventral. Silvery, each scale edged with black; opercular cleft black-edged; dorsal and caudal fins greyish, pectoral, ventral, and anal yellowish.

Total length 130 millim.

Numerous specimens from NampanDET, 2000 feet.

13. *Barbus schanicus*, sp. n.

Section *Barbodes*, Blkr. Depth of body $2\frac{3}{4}$ to 3 times in total length; length of head $3\frac{3}{4}$ to 4 times. Snout rounded, slightly prominent, as long as diameter of eye, which is $3\frac{1}{2}$ to $3\frac{2}{3}$ in length of head; interorbital width $2\frac{1}{2}$ times in length of head; rostral barbel as long as diameter of eye, maxillary barbel a little longer. Dorsal IV 8; spine strong, its stiff portion $\frac{3}{5}$ to $\frac{2}{3}$ length of head, serræ moderate, 22 to 25; the spine opposite to inner ventral ray, and equally distant from end of snout and caudal fin. Anal III 5, longest ray $\frac{1}{2}$ length of head. Scales 29-31 $\frac{6}{5\frac{1}{2}}$; 4 scales between lateral line and base of ventral. Olive-brown; belly silvery; fins greyish.

Total length 135 millim.

Toungyi, 4600 feet; four specimens. Fort Stedman, 3000 feet; two specimens.

14. *Barbus Dukai*, Day.

Two specimens from NampanDET, 2000 feet.

Lateral line 26-28.

15. *Barbus tor*, Ham. Buch.

NampanDET, 2000 feet.

16. *Barbus nigrovittatus*, sp. n.

Section *Labeobarbus*, Blkr. Depth of body equal to length of head, $3\frac{1}{2}$ to $3\frac{3}{4}$ times in total length. Snout obtusely pointed, slightly prominent, $1\frac{1}{3}$ to $1\frac{1}{2}$ diameter of eye, which is $4\frac{1}{2}$ times in length of head; interorbital width 3 times in length of head; rostral barbel $1\frac{1}{3}$ diameter of eye, maxillary barbel $1\frac{2}{3}$. Dorsal III 9; spine moderately strong, not serrated, its stiff portion half length of head, slightly in advance of vertical of first ventral ray, equally distant from end of snout and caudal fin. Anal II 5, longest ray $\frac{2}{3}$ to $\frac{2}{5}$ length of head. Scales 28 $\frac{3\frac{1}{2}}{3\frac{1}{2}}$; 2 scales between lateral line and base of ventral. Olive-brown above, white beneath, the two colours separated by a blackish stripe above the lateral line, as in *B. pleurotaenia*; dorsal and caudal fins greyish, pectoral, ventral, and anal white (in spirit).

Total length 130 millim.

Fort Stedman, 3000 feet. Two specimens.

17. *Barbus compressus*, sp. n.

Section *Hampala*, Blkr. Body strongly compressed, its depth $3\frac{1}{3}$ to $3\frac{2}{3}$ times in total length; length of head $3\frac{1}{3}$ to $3\frac{3}{4}$ times. Snout obtusely pointed, a little longer than diameter of eye, which is 4 to $4\frac{1}{2}$ times in length of head, and equals interorbital width; jaws equal, or lower slightly projecting; mouth wide, extending backwards to below anterior border of eye or slightly beyond; rostral barbel minute or absent, maxillary barbel small, about $\frac{1}{3}$ diameter of eye. Dorsal IV 8; spine very strong, with 17 to 22 strong serræ, $\frac{1}{2}$ to $\frac{2}{3}$ length of head (as long as head in the young) just behind vertical of inner ventral ray, nearer end of snout than caudal fin. Anal III 5, longest ray $\frac{2}{5}$ to $\frac{1}{2}$ length of head. Scales 35-37 $\frac{7}{5\frac{1}{3}}$; 3 scales between lateral line and base of ventral. Uniform silvery, brownish on the back; pectorals and ventrals with or without a greyish blotch.

Total length 240 millim.

Fort Stedman, 3000 feet. Numerous specimens.

18. *Barbus Stoliczkanus*, Day.

Fort Stedman, 3000 feet.

In these specimens the anterior black spot is absent or very indistinctly indicated.

19. *Barilius ornatus*, Sauvage.

B. barnoides, Vinciguerra.

Fort Stedman and Nampandet. Numerous specimens.

20. *Barilius guttatus*, Day.

Nampandet.

21. *Danio malabaricus*, Jerd.

Nampandet.

22. *Danio æquipinnatus*, McCl.

Toungyi, 4600 feet.

23. *Nemachilus brevis*, sp. n.

Depth of body equal to length of head, $3\frac{2}{3}$ times in total length. Eye $\frac{3}{4}$ length of snout, slightly less than inter-orbital width, $\frac{1}{4}$ length of head; head naked; maxillary barbel extending to præopercular border, outer rostral barbel to centre of eye; lower lip fringed. Depth of caudal peduncle half depth of body, equal to the distance between the anal and the caudal fins. Dorsal II 8, originating slightly in advance of base of ventrals, and a little nearer to base of caudal than to end of snout. Pectoral $\frac{2}{3}$ length of head, a little longer than ventrals, which do not quite reach anus. Anal II 5, halfway between dorsal and caudal. Caudal notched. Body entirely covered with imbricate scales, of which there are about 30 between dorsal and ventral fins. Pale reddish brown, dotted with black; a small black blotch at base of caudal.

Total length 58 millim.

Fort Stedman, 3000 feet. Three specimens.

24. *Nemachilus botia*, Ham. Buch.

Nampandet.

25. *Lepidocephalichthys Berdmorii*, Blyth.

Nampandet and Toungyi.

26. *Acanthopthalmus pangia*, Ham. Buch.

Nampandet.

Notopteridæ.

27. *Notopterus kaporat*, Lacép.

Fort Stedman.